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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------|
| 09/552,715 | 04/19/2000 | Seiji Umemoto | Q58947 | 3149 |
| 7590 09/29/2004 | | | | |
| Shghrue Mion Zinn Macpeak & Seas PLLC 2100 Pennsylvania Avenue NW Washington, DC 20037 | | | EXAMINER PARKER, KENNETH | |
| | | | ART UNIT 2871 | PAPER NUMBER |

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/552,715

Applicant(s)

UMEMOTO, SEIJI

Examiner

Kenneth A Parker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12 and 14-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The indicated allowability of claims previously indicated is withdrawn in view of the realization that the claimed ranges are fully anticipated by the reference, and the figure shows an even pitch, thereby meeting the limitations of the variation of pitches. Rejections based on the newly cited reference(s) follow.

Claims 1-3, 5-12, 17-22 are rejected under 35 U.S.C. 103(a) as being obvious to one of ordinary skill over DuNah et al 5420761 in view of Kalamash 5532852.

DuNah et al does disclose an edge lit back light in figure 3 with an angle of 55-45 degrees at one of the surfaces and 1-10 degrees (the preferred ranges in column 2) at the other, in a light pipe with an upper, lower and incident side surface, the lower is reflective, and output means are on the upper surface, and an LCD is on the upper surface including at least one polarizing plate. As the projections point substantially at 45 degrees, with almost the exact same ranges of the claimed variables, and directs light substantially downward to a diffusely reflective reflector directly attached, it clearly meets the means plus function limitations. The ratio of 8 to one or greater met by the indication of a depth of 1-10mm and a spacing of 100-250mm with an angle of 45-55 degrees, so all possible configurations meet 8 to one or greater. Almost all possible configurations meet the 10 degree slope in the preferred listings of the reference (the preferred configuration is 10 degrees; and employing the spacing and depth range of the reference takes the angle down to 5.7 degrees-, a narrower range

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than the instant invention, making the range limitations fully met by the reference.

The 45-55 is the same range as the 35-45, because they are referenced to different points (one is referenced to the normal, the other the surface). The width is 100-250 microns, which within the claimed range of 50-1500 microns.

Regarding the constraint that all of the prisms smaller angles are within 5 degrees on the whole device and 1 degree on neighboring prisms, the reference clearly shows the same pitch, which means the same angle, and therefore one of ordinary skill would have recognized that the angle is the same in the reference. Further the 5 degrees is greater than the largest angle in the references preferred embodiments.

Lacking from the disclosure is the use of a polarizer, however a polarizer was part of the conventional LCD, and would have been obvious to one of ordinary skill for that reason. Evidence that it was conventional is in the Patent and Trademark office classification definitions for class 349 search notes: "In this case, nominal cell structure refers to a broad recitation of substrates, electrodes (or conductive plates or electrical excitation means), alignment layers, a seal, spacers, and polarizers. ", and also in Kalamash's description of the typical active matrix LCD. Realistically polarizers were required in all of the standard LCDs used in laptops, so their use was more than merely conventional- it was ubiquitous.

Having the transmissivity of greater than 90% would have been obvious to one of ordinary skill as the transmissivity was one of the most well known things to have as close as possible to 100 as possible, and having the bumps be

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uniform was also a notoriously well known goal and obvious to one of ordinary skill for that reason.

Silver and aluminum were the conventionally employed materials and would have been obvious to one of ordinary skill for that reason.

Regarding claim 5, the pitch is fixed as the material is a solid.

Any assertion that something is well known is a taking of official notice Note: Any assertions that an element, practice or relationship was conventional has the incorporated motivations of the benefits of having established supply chains, well understood behavior and manufacturing methodologies.

Response to Arguments

The Duhnah reference refers to the normal, not to the plane, so the references 45-55 is the same as applicant's 35-45.

The following assertions that items were conventional or well known have not been challenged and therefore are acquiesced to and taken the status of admitted prior art:

- Lacking from the disclosure is the use of a polarizer, however a polarizer was part of the conventional LCD, and would have been obvious to one of ordinary skill for that reason. Evidence that it was conventional is in the Patent and Trademark office classification definitions for class 349 search notes: "In this case, nominal cell

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structure refers to a broad recitation of substrates, electrodes (or conductive plates or electrical excitation means), alignment layers, a seal, spacers, and polarizers. “, and in Kalamash’s description of the typical active matrix LCD

- Having the transmissivity of greater than 90% would have been obvious to one of ordinary skill as the transmissivity was one of the most well known things to have as close as possible to 100 as possible, and having the bumps be uniform was also a notoriously well known goal and obvious to one of ordinary skill for that reason.
- Silver and aluminum were the conventionally employed materials and
- would have been obvious to one of ordinary skill for that reason.

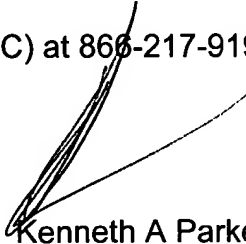
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Parker whose telephone number is 571-272-2298. The examiner can normally be reached on M-F 10:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kenneth A Parker
Primary Examiner
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